21. PARASITISM OF MALES OF *ORNITHODOROS* (*PAVLOVSKYELLA*) *THOLOZANI* VAR. *CROSSI* (LABOULENE & MEGNIN 1882) ARGASIDAE: IXODOIDEA, ON FED NYMPHS AND FEMALES OF THE SAME SPECIES

(*With two photographs*)

In Ixodidae the males of *Ixodes tenuirostris, I. holocyclus* and *Hyalomma detritum* have been observed to parasitize fed females of their own species (Nuttal & Warburton 1911; Moorhouse 1966; Usakov 1961). Sergent (1930) found that the nymphs of *Hyalomma mauritanicum* were cannibalistic. Amongst Argasidae a similar phenomenon has been noticed in *Argas persicus* (Nikitina 1959) *Ornithodoros verrucosus* and *O. papillipes* (Shrinanik 1939; Petrishceva 1947; as quoted by Nikitina 1959). Rao & Kalra (1949) observed unfed larvae of *O. tholozani* feeding on fed ones of the same species when both were kept in the same tube, and a similar case of parasitism was also observed by them twice with the nymphs.

The purpose of the present communication is to record the observations on the parasitism by male *Ornithodoros tholozani* on fed nymphs and females of the same species in the colony maintained in this laboratory.

The colony was initiated with the ticks collected from hilly region of Rajori in Jammu, India, on March 20, 1967. All the stages of tick were fed on rabbits once in 15 to 20 days. When the hungry ticks were released on the rabbit for feeding, the earlier instar nymphs were the first to attach on the host. They generally attached within five minutes of releasing. Later instar nymphs and females kept on crawling over the skin of rabbit for 10 to 15 minutes before attaching. It generally took 20 to 30 minutes for all the instars of nymphs and females to complete the blood meal.

The males were not observed to feed directly on rabbit. They invariably attached themselves to fed nymphs or fed females. Generally fully engorged free nymphs and females were sought by the males, but sometimes the nymphs and females still attached to the host in the act of feeding were attacked. The males crawled over them and pierced the integument of their dorsal surface with their mouth parts (Fig. 1). The males took about twenty minutes to become fully engorged with the blood of their 'hosts'. After the detachment of the feeding males the nymphs or females appeared much smaller, with their integument shrivelled up as the result of loss of ingested blood. A wound was also observed at the site of feeding, and generally a

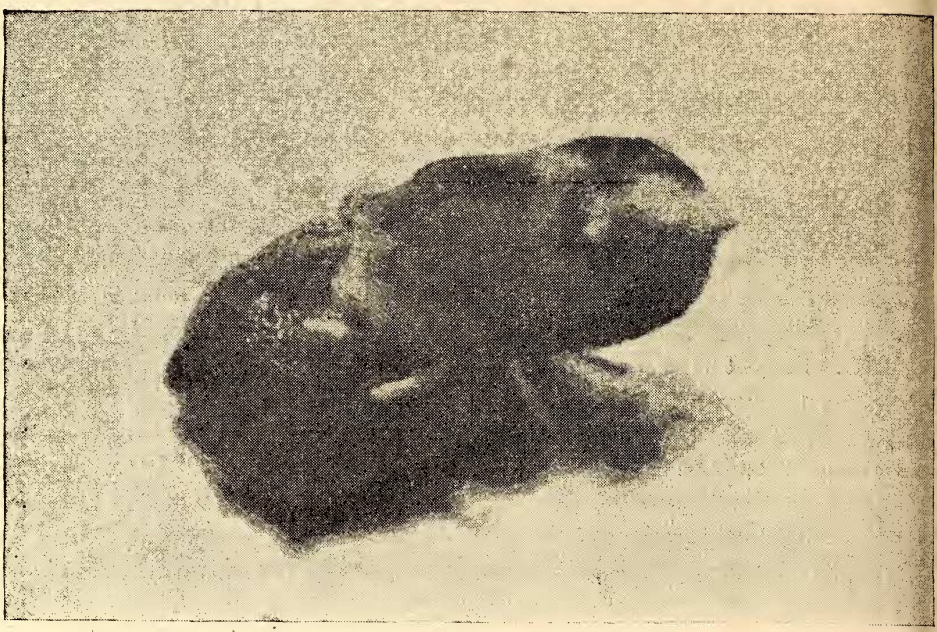

Fig. 1. The male *O. tholozani* attached to a nymph for feeding.

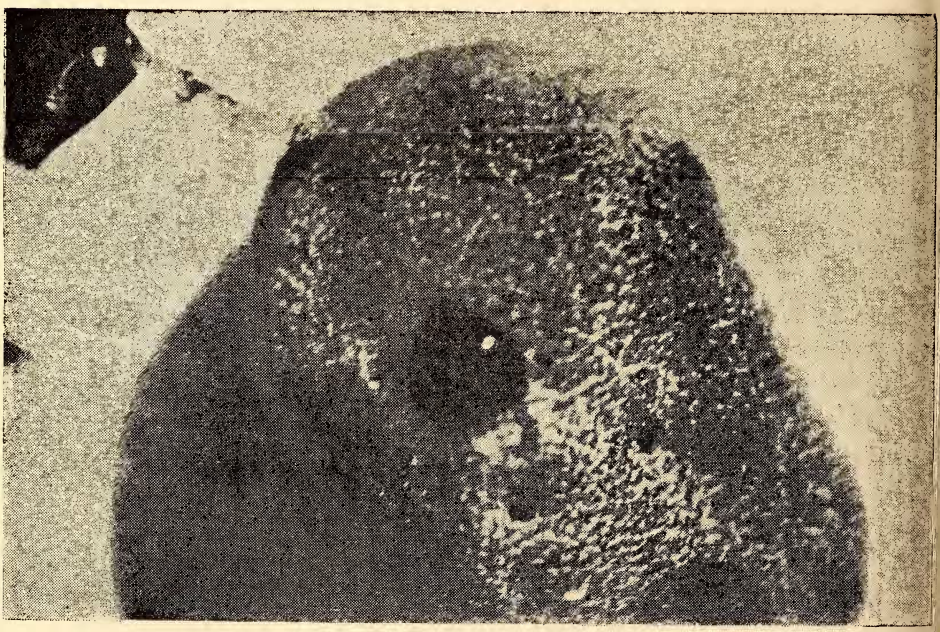

Fig. 2. Dorsal integument of the nymph with a drop of blood oozing out from the wound made by the male while feeding.

drop of blood or haemolymph was found oozing out from the wound (Fig. 2).

It had been pointed out by Nikitina (1959) and Rehacek (1965) that this type of homoparasitism in ticks might be of some importance in maintaining the pathogen in nature, by transmitting it among themselves, with the bite of the males. Though *O. tholozani* has been known to be the vector of spirochaetes causing relapsing fever in Kashmir (Rao & Kalra, 1949), it is difficult to say that this phenomenon of homoparasitism in this species of ticks has any epidemiological significance. More experimental evidence, however, is needed to make a definite statement in this direction.

ACKNOWLEDGEMENT

I wish to thank Lt. Col. R. N. Varma of Armed Forces Medical College, Poona, for providing the live ticks for the initiation of the colony.

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December 20, 1968.

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22. A RECORD OF PREDATORY MITE, *BOCHARTIA* SP. (ERYTHRAEIDAE; ACARINA) ON *CLAVIGRALLA GIBBOSA* SPINOLA

Clavigralla gibbosa S., popularly known as Tur-pod Bug, a minor pest of *Cajanus cajan* L. assumed serious status in Madhya Pradesh. In nature this pest is kept under control by parasites and predators. Lefroy (1909) and Misra (1924) have reported some chalcid egg

[1] The Virus Research Centre is maintained by the Indian Council of Medical Research. The Centre also receives a grant (3×4307) of the PL 480 Funds from the National Institute of Health, U.S.A.